

#### ABSTRACT OF THE DISCLOSURE

The present invention relates generally to novel protein molecules and to derivatives, analogues, chemical equivalents and mimetics thereof capable of modulating cellular activity and, in particular, modulating cellular activity via the modulation of signal transduction. More particularly, the present invention relates to human sphingosine kinase and to derivatives, analogues, chemical equivalents and mimetics thereof. The present invention also contemplates genetic sequences encoding said protein molecules and derivatives, analogues, chemical equivalents and mimetics thereof. The molecules of the present invention are useful in a range of therapeutic, prophylactic and diagnostic applications.